

REMARKS

Claims 2, 6-9, and 21-50 are pending in this Application.

The Applicant thanks Examiner **Ali Zamani** for the Office action mailed 2 October 2001 (Paper No. 11). The Applicant has read and carefully considered Paper No. 11.

In Paper No. 11, the Examiner discusses the following four references:

U.S. Patent No. 5,608,418 issued on 4 March 1997 to McNally

U.S. Patent No. 6,097,364 issued on 1 August 2000 to Miyamoto et al.

U.S. Patent No. 6,037,921 issued on 14 March 2000 to Matsumoto et al.

U.S. Patent No. 5,784,037 issued on 21 July 1998 to Inoue

The present invention relates to a method of connecting a video display unit to a computer system *after* the computer system has been initialized and *while* the computer system is being operated by a user. The present invention also relates to an apparatus for performing that method.

The present invention is intended to make a computer more convenient to use, so that a user can replace a display unit while the computer remains on. It can be inconvenient to need to reboot a computer when replacing a display unit. The present invention sets forth a method and apparatus for replacing a display unit without rebooting the computer. The computer will detect the newly connected display unit and operate with the new display unit smoothly, without a need to reboot the computer.

The claims 2, 6-9, and 21-50 stand rejected under 35 U.S.C. § 103 as being unpatentable over

a combination of McNally and Miyamoto. The Examiner also discusses the teachings of Matsumoto and Inoue.

The Applicant respectfully traverses. The Applicant respectfully submits that the § 103 rejection is fatally flawed, because the Examiner failed to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, for a rejection of claims under 35 U.S.C. § 103, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See the *Manual of Patent Examining Procedure* (M.P.E.P.) §§ 706.02(j) and 2143, and 35 U.S.C. § 103. If the Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

CLAIM 26

The Applicant's independent method claim 26 shall be discussed first. The claim 26 sets forth features not taught or suggested by the four references discussed by the Examiner.

The claim 26 sets forth:

A method, comprising:

connecting a video display unit to a computer system after said computer system has

been initialized and while said computer system is being operated by a user, said video display unit conveying varying visual information to a user;
detecting whether said video display unit is connected to said computer system;
when said video display unit is detected as being connected to said computer system,
reading first data corresponding to said video display unit; and
transmitting resolution data to a video card coupled to said video display unit, said resolution data corresponding to said first data.

The four references discussed by the Examiner in Paper No. 11 fail to teach or suggest the features set forth in claim 26.

McNally describes a flat panel display interface for a high resolution computer graphics system. McNally describes a computer graphics subsystem that renders images on either a cathode ray tube (CRT) display or a flat panel display (column 1 at lines 62-64). According to McNally, a user can connect either a flat panel display 26 or a cathode ray tube (CRT) display 28 to a computer (Figure 1). McNally does not teach that the flat panel display 26 is connected to a computer after the computer has been initialized and while the computer is being operated by a user. McNally does not teach that the CRT display 28 is connected to a computer after the computer has been initialized and while the computer is being operated by a user. Therefore, *McNally fails to teach the features of Applicant's claim 26 at lines 2-3.*

Miyamoto describes a display control apparatus which compresses image data to reduce the size of a display memory. It is an object of Miyamoto to reduce the memory capacity required to detect a partial area to be rewritten in a field (column 3 at lines 3-5). According to Miyamoto, as depicted in Figure 1, a display panel unit 3 is communicating with an information processing system

2. Also, Figure 1 shows that the information processing system 2 is communicating with a computer 1. A cathode ray tube controller (CRTC) 15 is controlled by a central processing unit (CPU) 12 in the computer 1 to output CRT display signals. Miyamoto does not teach that the display 3 is connected to a computer after the computer has been initialized and while the computer is being operated by a user. Therefore, *Miyamoto fails to teach the features of Applicant's claim 26 at lines 2-3.*

Matsumoto describes a display control apparatus with independent information receivers. It is an object of the Matsumoto device to provide a display controller that generates display data in accordance with conditions of display means (column 2 at lines 53-56). Matsumoto is intended to reduce problems related to a change in temperature, for example. A color characteristic is sometimes changed due to a change in temperature (column 2 at lines 45-48). In Matsumoto, as depicted in Figure 1, a display panel unit 3 is communicating with a display control device 1. Also, Figure 1 shows that the display control device 1 is communicating with a computer 2. Matsumoto does not teach that the display 3 is connected to a computer after the computer has been initialized and while the computer is being operated by a user. Therefore, *Matsumoto fails to teach the features of Applicant's claim 26 at lines 2-3.*

Inoue describes a display system. The Inoue device relates to a display system to display image data using a display panel having scan signal lines and information signal lines are arranged in a matrix form (column 1 at lines 10-15). Inoue is intended to make it more convenient to change a display mode of a display device. For example, a change from a video graphics array (VGA) mode

to an enhanced graphics adapter (EGA) mode is discussed in column 3 at lines 44-65. Figure 1 of Inoue shows display panel 2 that is in communication with a host central processing unit 11. Inoue does not teach that the display 2 is connected to a computer after the computer has been initialized and while the computer is being operated by a user. Therefore, *Inoue fails to teach the features of Applicant's claim 26 at lines 2-3.*

In view of the foregoing, the Applicant respectfully believes that the Examiner has failed to establish a *prima facie* case of obviousness regarding claim 26.

Accordingly, the Applicant respectfully submits that claim 26 is patentable. The Applicant respectfully requests that the Examiner withdraw the rejection of claim 26.

CLAIMS 2, 6-9, 21-50

The Applicant has demonstrated above that the Examiner failed to establish a *prima facie* case of obviousness regarding independent claim 26.

The Applicant respectfully submits that all pending independent claims set forth features not taught or suggested by the four references cited by the Examiner: McNally, Matsumoto, Miyamoto, and Inoue.

The four references fail to teach or suggest the following features set forth in independent claim 2: "A method, comprising: *while power is being supplied* to a processing unit, detecting

whether a video display unit is *newly coupled* to a connecting unit of said processing unit ... said detecting further comprising a polling operation periodically checking said connecting unit."

The four references fail to teach or suggest the following features set forth in independent claim 6: "A method, comprising: *while power is being supplied* to a processing unit, detecting whether a video display unit is *newly coupled* to a connecting unit of said processing unit ... said detecting further comprising a polling operation periodically checking said connecting unit".

The four references fail to teach or suggest the following features set forth in independent claim 7: "A method, comprising: *while power is being supplied* to a processing unit, detecting whether a video display unit is *newly coupled* to a connecting unit of said processing unit ... said detecting further comprising a polling operation periodically checking said connecting unit".

The four references fail to teach or suggest the following features set forth in independent claim 8: "A method, comprising: *while power is being supplied* to a processing unit, detecting whether a video display unit is *newly coupled* to a connecting unit of said processing unit ... said detecting further comprising a sensing of an interrupt signal occurring when said video display unit is newly coupled to said connecting unit".

The four references fail to teach or suggest the following features set forth in independent claim 9: "A method, comprising: *while power is being supplied* to a processing unit, detecting whether a video display unit is *newly coupled* to a connecting unit of said processing unit ... said

detecting further comprising a sensing of an interrupt signal occurring when said video display unit is newly coupled to said connecting unit".

The four references fail to teach or suggest the following features set forth in independent claim 21: "A method, comprising: connecting a video display unit to a computer system *after said computer system has been powered on and initialized*, said video display unit conveying varying visual information to a user; detecting whether said video display unit is connected to said computer system; when said video display unit is detected as being connected to said computer system, reading first data corresponding to said video display unit; determining whether said first data corresponds to second data stored in a memory unit; and when said first data does not correspond to said second data stored in said memory unit, storing said first data in said memory unit and identifying a resolution corresponding to said video display unit and transmitting said resolution to a video card coupled to said video display unit."

The four references fail to teach or suggest the following features set forth in independent claim 31: "A method, comprising: powering on a computer system; connecting a video display unit to a computer system *after said powering on of said computer system*, said video display unit conveying varying visual information to a user; detecting whether said video display unit is connected to said computer system; when said video display unit is detected as being connected to said computer system, reading first data corresponding to said video display unit; and transmitting resolution data to a video card coupled to said video display unit, said resolution data corresponding to said first data."

The four references fail to teach or suggest the following features set forth in independent claim 36: "An apparatus, comprising: a computer system processing data; a video display unit conveying varying visual information to a user, said video display unit being connected to said computer system *after said computer system has been powered on and initialized*; a processing unit being installed in said computer system, said processing unit processing the data including the visual information, said processing unit detecting whether said video display unit is connected to said computer system, said processing unit reading first data corresponding to said video display unit when said video display unit is detected, said processing unit determining whether said first data corresponds to second data stored at said computer system, said processing unit storing said first data and determining resolution data corresponding to said video display unit and transmitting said resolution data when said first data does not correspond to said second data."

The four references fail to teach or suggest the following features set forth in independent claim 43: "An apparatus, comprising: a computer system processing data; a video display unit conveying varying visual information to a user, said video display unit being connected to said computer system *after said computer system has been booted*; and a processing unit being installed in said computer system, said processing unit processing the data including the visual information, said processing unit detecting whether said video display unit is connected to said computer system, said processing unit reading first data corresponding to said video display unit and transmitting resolution data corresponding to said first data."

Obviousness can only be established by combining or modifying the teachings of the cited art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); M.P.E.P. § 2143.01.

When applying 35 U.S.C. § 103, the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. *Hodosh v. Block Drug Co., Inc.* 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187, n.5 (Fed. Cir. 1986); M.P.E.P. § 2141.

The Applicant is aware that “[a]ny judgement on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper.” *In re McLaughlin* 443 F.2d 1392, 170 USPQ 209, 212 (CCPA 1971); M.P.E.P. § 2145. The Examiner here has utilized **impermissible** hindsight reasoning, because the Examiner has relied upon knowledge gleaned from the Applicant's disclosure.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the cited art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2143.

“While the [prior art] apparatus may be capable of being modified to run the way [the applicant's] apparatus is claimed, there must be a suggestion or motivation in the reference to do so.” *In re Mills*, 16 USPQ2d 1430, 1432; M.P.E.P. § 2143.01. “The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.” *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The law under 35 U.S.C. § 103 is well settled that "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." *ACS Hospital System, Inc v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). The Examiner must point to something in the cited art that suggests in some way a modification of a particular reference or a combination of references in order to arrive at Applicant's claimed invention. Absent such a showing, the Examiner has improperly used Applicant's disclosure as an instruction book on how to reconstruct the cited art to arrive at Applicant's claimed invention. The Examiner has wrongly used knowledge gleaned only from the Applicant's disclosure to reach the Examiner's conclusion of obviousness.

It is clear that the Examiner has failed to establish that the teachings from the cited art itself would have suggested the claimed subject matter to a person of ordinary skill in the art, and it is clear that the Examiner has used impermissible hindsight to combine and modify the cited art references.

If an independent claim is not anticipated by a particular reference, then any claim depending

from that independent claim is also not anticipated by the particular reference. This is true because the claims depending from that independent claim necessarily incorporate all limitations set forth in that independent claim. Accordingly, in view of the foregoing, the Applicant respectfully requests that the Examiner allow all claims 2, 6-9, and 21-50.

The Examiner has not satisfied the requirements set forth in 35 U.S.C. § 103 and M.P.E.P. § 2143 regarding a rejection of claims based on obviousness.

The Examiner has failed to establish the aforementioned **first** basic criterion of a *prima facie* case of obviousness because the Examiner failed to show that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, in accordance with M.P.E.P. § 2143 and 35 U.S.C. § 103, to arrive at the Applicant's claimed invention. There is no reasonable suggestion or motivation to combine McNally '418 and Miyamoto '364 in order to arrive at the Applicant's claimed invention. In addition, there is no reasonable suggestion or motivation to modify McNally '418 and Miyamoto '364 in order to arrive at the Applicant's claimed invention.

Furthermore, the Examiner has failed to establish the aforementioned **third** basic criterion of a *prima facie* case of obviousness because the Examiner failed to show that McNally '418 and Miyamoto '364 teach or suggest all the claim limitations of claims 2, 6-9, and 21-50. The Examiner has failed to establish a *prima facie* case of obviousness because the Examiner failed to show that

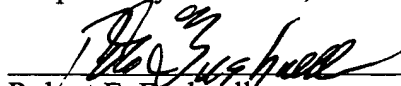
the references teach or suggest all the claim limitations.

The foregoing shows that the Examiner has failed to establish a *prima facie* case of obviousness. In view of the noted deficiencies of McNally '418, the inability of Miyamoto '364 to remedy the noted deficiencies of McNally '418, and the inability of Inoue and Matsumoto to remedy these deficiencies, and the unlikely combination and modification as proposed, the Applicant respectfully submits that the rejection of claims 2, 6-9, and 21-50 is improper.

Accordingly, in view of the foregoing, the Applicant respectfully requests that the claims 2, 6-9, and 21-50 be allowed.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

Respectfully submitted,



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